ABSTRACT

ALKYL AMINO ACID DERIVATIVES USEFUL AS PHARMACEUTICAL AGENTS

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GABA-related pro-drugs of the formula (III) are provided that when administered to humans or other mammals provide an increased duration of active compound in the plasma compared to compounds of corresponding structure in which labile groups are not present. The compounds are of the formula (III)

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$$\begin{array}{ccc}
R^4 \\
O & P \\
N-Q \\
R^1 & R^2 \\
R^3
\end{array}$$
(III)

In the above formula:

P represents hydrogen or methyl;

Q represents a labile amine- or amide-forming organic group that becomes removed in the human or animal body;

 R^1 represents straight or branched $C_2 - C_6$ alkyl, $C_3 - C_6$ cycloalkyl or phenyl;

R² represents hydrogen or methyl; and

R³ represents hydrogen, methyl or carboxyl; and

 R^4 represents hydrogen or a labile ester-forming group selected from substituted and unsubstituted $C_1 - C_6$ alkyl, benzyl and phenyl groups that become removed in the human or animal body. In the above formula when R^1 is phenyl, R^2 , R^3 and R^4 are not simultaneously hydrogen. Pharmaceutically acceptable salts of any salt-forming compound within the above class are also included. The compounds may be used to treat a range of neurological conditions, e.g. epilepsy and pain.